

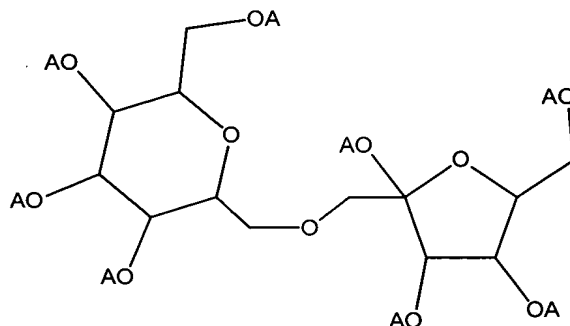
CLAIMS

What is claimed is:

- 5 1. A process for extruding a resin-containing composition comprising:
 - a) providing an extrudable mass comprising at least one extrudable resin and saccharide ester; and
 - b) extruding said extrudable mass to produce an extrudate.
- 10 2. The process of claim 1 wherein saccharide ester is present in an amount effective to improve the extrudability of said extrudable mass relative to the extrudability of the extrudable mass in the absence of saccharide ester.
- 15 3. The process of claim 1 wherein saccharide ester is present in an amount effective to improve the extrudability of said extrudable mass by at least about 10 percent relative to the extrudability of said extrudable mass in the absence of saccharide ester.
- 20 4. The process of claim 1 wherein said step of extruding produces an extruder head pressure and wherein saccharide ester is present in an amount effective to reduce said extruder head pressure relative to use of the same composition without said saccharide ester.
- 25 5. The process of claim 1 wherein said step of extruding produces an extruder head pressure and wherein saccharide ester is present in an amount effective to reduce said extruder head pressure by at least about 10 percent relative to use of the same composition without said saccharide ester.
- 30 6. The process of claim 1 wherein said step of extruding produces an extruder torque and wherein saccharide ester is present in an amount effective to reduce the required extruder torque relative to use of the same composition without said saccharide ester.
7. The process of claim 1 wherein said step of extruding produces an extruder torque and wherein saccharide ester is present in an amount effective to reduce the required extruder torque by at least about 10 percent relative to use of the same composition without said saccharide ester.

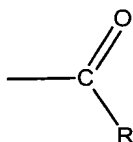
8. The process of claim 1 wherein said saccharide ester is present in an amount effective to increase extrudate gloss relative to the use of said composition without said saccharide ester.
- 5 9. The process of claim 1 wherein said saccharide ester is present in an amount effective to increase extrudate gloss by at least about 10 percent relative to the use of said composition without said saccharide ester.
- 10 10. The process of claim 4 wherein said saccharide ester is present in an amount effective to reduce said extruder head pressure by at least about 10 percent relative to use of the same composition without said saccharide ester and wherein the extrudate gloss is not substantially reduced relative to the use of said composition without said saccharide ester.
- 15 11. The process of claim 6 wherein said saccharide ester is present in an amount effective to reduce said extruder torque by at least about 10 percent relative to use of the same composition without said saccharide ester and wherein the extrudate gloss is not substantially reduced relative to the use of said composition without said saccharide ester.
- 20 12. The process of claim 4 wherein said saccharide ester is present in an amount effective to reduce said extruder head pressure by at least about 10 percent relative to use of the same composition without said saccharide ester and wherein the dimensional stability of said extrudate is not substantially reduced relative to the use of said composition without said saccharide ester.
- 25 13. The process of claim 6 wherein said saccharide ester is present in an amount effective to reduce said extruder torque by at least about 10 percent relative to use of the same composition without said saccharide ester and wherein the dimensional stability of said extrudate is not substantially reduced relative to the use of said composition without said saccharide ester.
- 30 14. The process of claim 1 wherein said saccharide ester is present in an amount effective to increase dynamic heat stability of the extrudable mass relative to said mass in the absence of said saccharide ester.
15. The process of claim 1 wherein said saccharide ester comprises one or more compounds of Formula I.

Formula I:



wherein "A" is hydrogen or has the structure of Structure I:

Structure I



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wherein "R" is an aliphatic or aromatic moiety of about eight to about 40 carbon atoms, and wherein at least one "A" moiety of Formula I is a moiety of Structure I.

16. The process of claim 15 wherein all of the "A" moieties of at least about 70 wt. % of the sucrose ester compounds of Formula I comprise moieties of Structure I.

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17. The process of claim 16, wherein the "R" moiety of Structure I is a stearyl moiety.

18. The process of claim 1 wherein the amount of saccharide ester present in said extrudable composition is from about 0.01 PHR to about 2 PHR.

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19. A composition comprising polyvinyl chloride and at least one saccharide ester, said composition being an extrudable composition.

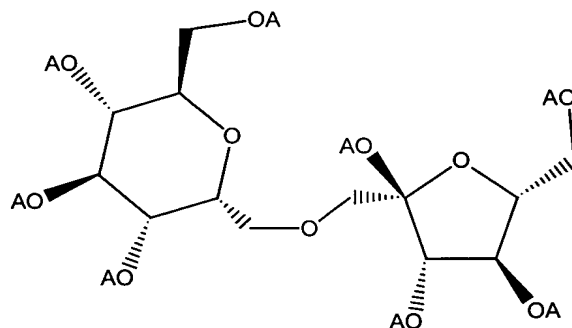
20. The composition of claim 19 wherein said at least one saccharide ester compound is present in an amount effective to reduce the apparent viscosity of said composition.

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21. The composition of claim 19 wherein said at least one saccharide ester compound is present in an amount effective to increase the dynamic heat stability of said composition in a plastic flow state.

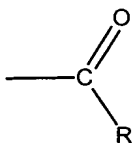
22. The composition of claim 19 wherein said at least one saccharide ester compound is present in an amount effective to increase the gloss of the composition upon extrusion of the composition.
23. The composition of claim 19 wherein the saccharide ester compound comprises one or more compounds of Formula I.

Formula I:



wherein "A" is hydrogen or has the structure of Structure I:

Structure I



wherein "R" is an aliphatic or aromatic moiety of about eight to about 40 carbon atoms, and wherein at least one "A" moiety of Formula I is a moiety of Structure I.

24. The composition of claim 23 wherein all of the "A" groups of at least about 70 wt. % of the ester compounds comprise a moiety of Structure I.
25. The composition of claim 23 wherein the "R" moiety of Structure I is a stearyl moiety.
26. The composition of claim 19 wherein said composition comprises saccharide ester in an amount of from about 0.01 PHR to about 2 PHR.
27. The composition of claim 19 wherein said saccharide ester comprises sucrose soyate.

28. The composition of claim 19 wherein said saccharide ester comprises sucrose behenate.
29. The composition of claim 23 wherein at least about 70 wt. % of said saccharide ester compounds are octa-substituted with an "A" group of Structure I wherein the "R" group of Structure I comprises an aliphatic moiety that is linear or branched saturated or unsaturated which comprises between about 8 and about 40 carbon atoms and which is optionally substituted with one or more a halogen functional groups.
30. The composition of claim 23 wherein the "R" group comprises between about 12 and about 25 carbon atoms.
31. The composition of claim 19 wherein the amount of saccharide ester present in said extrudable composition is from about 0.05 PHR to about 0.9 PHR.
32. An additive composition for addition to an extrudable PVC composition comprising:
- (i) at least one saccharide ester;
 - (ii) at least one additional constituent selected from the group consisting of supplemental lubricants and supplemental heat stabilizers, said constituents being further characterized by chemical and physical compatibility with said saccharide ester; and
 - (iii) optionally one or more extrudable PVC composition additives.
33. The composition of claim 32 wherein the saccharide ester is selected from the group consisting of sucrose stearate, sucrose soyate, and sucrose behenate.
34. The composition of claim 33 wherein said additional constituent comprises at least one lubricant selected from the group consisting of paraffin wax lubricants and oxidized polyethylene lubricants and said saccharide ester is present in an amount of from about 1 wt. % to about 99 wt. % of the additive composition.
35. The composition of claim 33 wherein said additional constituent comprises at least one member selected from the group consisting of tin-based heat stabilizers, organic-based heat stabilizers, heavy metal-based heat stabilizers and mixed metal-based heat stabilizers, and wherein said saccharide ester is

present in an amount of from about 1 wt. % to about 99 wt. % of the additive composition.

36. The composition of claim 34 further comprising a mixture of calcium hydroxide and stearic acid present in a ratio of from about 1:6 to about 1:10.

5 37. The composition of claim 34 further comprising calcium stearate.

38. A process for forming an extrudable composition comprising providing an extrudable resin and admixing with said resin an additive composition comprising at least one saccharide ester and at least one additional constituent selected from the group consisting of supplemental lubricants and supplemental heat stabilizers.

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39. An extruded product comprising polyvinyl chloride and at least one saccharide ester.

40. The product of claim 38 wherein said at least one saccharide ester is present in an amount effective to improve the dimensional stability of said product by at least about 10 percent relative to the same product in the absence of the said at least one saccharide ester.

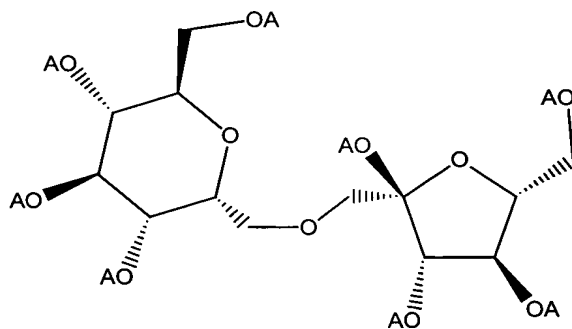
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41. The product of claim 38 wherein said at least one saccharide ester compound is present in an amount effective to increase the gloss of the product relative to the same product in the absence of the said at least one saccharide ester.

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42. The product of claim 39 wherein the saccharide ester compound comprises one or more compounds of Formula I.

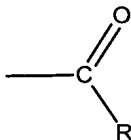
Formula I:



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wherein "A" is hydrogen or has the structure of Structure I:

Structure I



wherein "R" is an aliphatic or aromatic moiety of about eight to about 40 carbon atoms, and wherein at least one "A" moiety of Formula I is a moiety of Structure I.

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43. The product of claim 42 wherein all of the "A" groups of at least about 70 wt. % of the ester compounds comprise a moiety of Structure I.
44. The product of claim 43 wherein the "R" moiety of Structure I is a stearyl moiety.
- 10 45. The product of claim 42 wherein said composition comprises saccharide ester in an amount of from about 0.01 PHR to about 2 PHR.
46. The product of claim 42 wherein said saccharide ester compound comprises sucrose soyate.
47. The product of claim 42 wherein said saccharide ester compound comprises
- 15 sucrose behenate.
48. A decorative molding comprising the product of claim 42.
49. A fencing member comprising the product of claim 42.
50. Siding comprising the product of claim 42.
51. Pipe comprising the product of claim 42.
- 20 52. An electrical conduit comprising the product of claim 42.
53. A window member comprising the product of claim 42.
54. A door jamb comprising the product of claim 42.
55. A base board comprising the product of claim 42.
56. Flashing comprising the product of claim 42.
- 25 57. An extrudate product made in accordance with claim 1.
58. A decorative molding comprising an extrudate made in accordance with claim 1.
59. A fencing member comprising an extrudate made in accordance with claim 1.
60. Siding comprising an extrudate made in accordance with claim 1.

- 61. Pipe comprising an extrudate made in accordance with claim 1.
- 62. An electrical conduit comprising an extrudate made in accordance with claim 1.
- 63. A window member comprising an extrudate made in accordance with claim 1.
- 5 64. A door jamb comprising an extrudate made in accordance with claim 1.
- 65. A base board comprising an extrudate made in accordance with claim 1.
- 66. Flashing comprising an extrudate made in accordance with claim 1.
- 67. A process for extruding a composition comprising:
 - 10 an extrudable composition comprising an extrudable resin, at least one saccharide ester, and at least one additional constituent selected from the group consisting of supplemental lubricants, supplemental heat stabilizers and combinations of these; and extruding the extrudable composition to produce an extrudate.
- 68. The product of claim 39 according to ASTM 2003 specification D 3679-03e2.
- 15 69. The product of claim 39 according to ASTM 2003 specification D 1785-03.
- 70. The product of claim 39 according to German Institute for Standardization November 1 2000 specification DIN 16830-3.